



ENTERED

PCT09

RAW SEQUENCE LISTING

DATE: 02/14/2003

PATENT APPLICATION: US/09/646,950A

TIME: 13:50:20

Input Set : A:\#321994 v1 - 350013-71 Sequence Listing.txt

Output Set: N:\CRF4\02142003\I646950A.raw

```

5 <110> APPLICANT: Watts, Colin
7   University of Dundee
11 <120> TITLE OF INVENTION: Enzyme Inhibition
15 <130> FILE REFERENCE: DUNW/P20631PC
C--> 19 <140> CURRENT APPLICATION NUMBER: US/09/646,950A
C--> 21 <141> CURRENT FILING DATE: 2003-01-28
25 <150> PRIOR APPLICATION NUMBER: GB 9806442.1
27 <151> PRIOR FILING DATE: 1998-03-26
31 <150> PRIOR APPLICATION NUMBER: US 60/086966
33 <151> PRIOR FILING DATE: 1998-05-28
37 <160> NUMBER OF SEQ ID NOS: 32
41 <170> SOFTWARE: PatentIn Ver. 2.0
45 <210> SEQ ID NO: 1
47 <211> LENGTH: 4
49 <212> TYPE: PRT
51 <213> ORGANISM: Artificial Sequence
55 <220> FEATURE:
57 <223> OTHER INFORMATION: Description of Artificial Sequence:peptide
59   sequence which may be comprised in a competitive
61   inhibitor of AEP
65 <400> SEQUENCE: 1
67 Ala Glu Asn Lys
69   1
75 <210> SEQ ID NO: 2
77 <211> LENGTH: 4
79 <212> TYPE: PRT
81 <213> ORGANISM: Artificial Sequence
85 <220> FEATURE:
87 <223> OTHER INFORMATION: Description of Artificial Sequence:peptide
89   sequence which may be comprised in a competitive
91   inhibitor of AEP
95 <400> SEQUENCE: 2
97 Lys Asn Asn Glu
99   1
105 <210> SEQ ID NO: 3
107 <211> LENGTH: 295
109 <212> TYPE: PRT
111 <213> ORGANISM: Homo sapiens
115 <400> SEQUENCE: 3
117 Met His Arg Arg Arg Ser Arg Ser Cys Arg Glu Asp Gln Pro Val Met
119   1           5           10           15
123 Asp Asp Gln Arg Asp Leu Ile Ser Asn Asn Glu Gln Leu Pro Met Leu
125           20           25           30

```

RAW SEQUENCE LISTING

DATE: 02/14/2003

PATENT APPLICATION: US/09/646,950A

TIME: 13:50:20

Input Set : A:\#321994 v1 - 350013-71 Sequence Listing.txt

Output Set: N:\CRF4\02142003\I646950A.raw

```

129 Gly Arg Arg Pro Gly Ala Pro Glu Ser Lys Cys Ser Arg Gly Ala Leu
131      35      40      45
135 Tyr Thr Gly Phe Ser Ile Leu Val Thr Leu Leu Leu Ala Gly Gln Ala
137      50      55      60
141 Thr Thr Ala Tyr Phe Leu Tyr Gln Gln Gln Gly Arg Leu Asp Lys Leu
143 65      70      75      80
147 Thr Val Thr Ser Gln Asn Leu Gln Leu Glu Asn Leu Arg Met Lys Leu
149      85      90      95
153 Pro Lys Pro Pro Lys Pro Val Ser Lys Met Arg Met Ala Thr Pro Leu
155      100      105      110
159 Leu Met Gln Ala Leu Pro Met Gly Ala Leu Pro Gln Gly Pro Met Gln
161      115      120      125
165 Asn Ala Thr Lys Tyr Gly Asn Met Thr Glu Asp His Val Met His Leu
167      130      135      140
171 Leu Gln Asn Ala Asp Pro Leu Lys Val Tyr Pro Pro Leu Lys Gly Ser
173 145      150      155      160
177 Phe Pro Glu Asn Leu Thr His Leu Lys Asn Thr Met Glu Thr Ile Asp
179      165      170      175
183 Trp Lys Val Phe Glu Ser Trp Met His His Trp Leu Leu Phe Glu Met
185      180      185      190
189 Ser Arg His Ser Leu Glu Gln Lys Pro Thr Asp Gln Pro Pro Lys Val
191      195      200      205
195 Leu Thr Lys Cys Gln Glu Glu Val Ser His Ile Pro Ala Val His Pro
197      210      215      220
201 Gly Ser Phe Arg Pro Lys Cys Asp Glu Asn Gly Asn Tyr Leu Pro Leu
203 225      230      235      240
207 Gln Cys Tyr Gly Ser Ile Gly Tyr Cys Trp Cys Val Phe Pro Asn Gly
209      245      250      255
213 Thr Glu Val Pro Asn Thr Arg Ser Arg Gly His His Asn Cys Ser Glu
215      260      265      270
219 Ser Leu Glu Leu Glu Asp Pro Ser Ser Gly Leu Gly Val Thr Lys Gln
221      275      280      285
225 Asp Leu Gly Pro Val Pro Met
227      290      295
233 <210> SEQ ID NO: 4
235 <211> LENGTH: 24
237 <212> TYPE: PRT
239 <213> ORGANISM: Artificial Sequence
243 <220> FEATURE:
245 <223> OTHER INFORMATION: Description of Artificial Sequence:Sequence
247 preceding tetanus toxin fragment
251 <400> SEQUENCE: 4
253 Met Gly His Gly His His His His His His His His His Ser Ser
255 1      5      10      15
259 Gly His Ile Glu Gly Arg His Ile
261      20
267 <210> SEQ ID NO: 5
269 <211> LENGTH: 36
271 <212> TYPE: DNA

```

RAW SEQUENCE LISTING

DATE: 02/14/2003

PATENT APPLICATION: US/09/646,950A

TIME: 13:50:20

Input Set : A:\#321994 v1 - 350013-71 Sequence Listing.txt

Output Set: N:\CRF4\02142003\I646950A.raw

```

273 <213> ORGANISM: Artificial Sequence
277 <220> FEATURE:
279 <223> OTHER INFORMATION: Description of Artificial Sequence:primer
283 <400> SEQUENCE: 5
285 cgctacactc cgaacgcggc gatcgattct ttcggt      36
289 <210> SEQ ID NO: 6
291 <211> LENGTH: 24
293 <212> TYPE: DNA
295 <213> ORGANISM: Artificial Sequence
299 <220> FEATURE:
301 <223> OTHER INFORMATION: Description of Artificial Sequence:primer
305 <400> SEQUENCE: 6
307 agcggataac aatttcacac agga      24
311 <210> SEQ ID NO: 7
313 <211> LENGTH: 17
315 <212> TYPE: DNA
317 <213> ORGANISM: Artificial Sequence
321 <220> FEATURE:
323 <223> OTHER INFORMATION: Description of Artificial Sequence:primer
327 <400> SEQUENCE: 7
329 gtaaaacgac ggccagt      17
333 <210> SEQ ID NO: 8
335 <211> LENGTH: 24
337 <212> TYPE: PRT
339 <213> ORGANISM: Artificial Sequence
343 <220> FEATURE:
345 <223> OTHER INFORMATION: Description of Artificial Sequence:synthetic
347 transferrin peptide
351 <400> SEQUENCE: 8
353 Gln Gln Gln His Leu Phe Gly Ser Asn Val Thr Asp Cys Ser Gly Asn
355 1 5 10 15
359 Phe Cys Leu Phe Arg Lys Lys Lys
361 20
367 <210> SEQ ID NO: 9
369 <211> LENGTH: 9
371 <212> TYPE: PRT
373 <213> ORGANISM: Artificial Sequence
377 <220> FEATURE:
379 <223> OTHER INFORMATION: Description of Artificial Sequence:cleavage
381 fragment from synthetic transferrin peptide
385 <400> SEQUENCE: 9
387 Gln Gln Gln His Leu Phe Gly Ser Asn
389 1 5
395 <210> SEQ ID NO: 10
397 <211> LENGTH: 15
399 <212> TYPE: PRT
401 <213> ORGANISM: Artificial Sequence
405 <220> FEATURE:
407 <223> OTHER INFORMATION: Description of Artificial Sequence:cleavage

```

RAW SEQUENCE LISTING

DATE: 02/14/2003

PATENT APPLICATION: US/09/646,950A

TIME: 13:50:20

Input Set : A:\#321994 v1 - 350013-71 Sequence Listing.txt

Output Set: N:\CRF4\02142003\I646950A.raw

```

409      fragment from synthetic transferrin peptide
413 <400> SEQUENCE: 10
415 Val Thr Asp Cys Ser Gly Asn Phe Cys Leu Phe Arg Lys Lys Lys
417   1           5           10           15
423 <210> SEQ ID NO: 11
425 <211> LENGTH: 8
427 <212> TYPE: PRT
429 <213> ORGANISM: Artificial Sequence
433 <220> FEATURE:
435 <223> OTHER INFORMATION: Description of Artificial Sequence:cleavage
437      fragment from synthetic transferrin peptide
441 <400> SEQUENCE: 11
443 Phe Cys Leu Phe Arg Lys Lys Lys
445   1           5
451 <210> SEQ ID NO: 12
453 <211> LENGTH: 21
455 <212> TYPE: PRT
457 <213> ORGANISM: Homo sapiens
461 <400> SEQUENCE: 12
463 Gln Gln Gln His Leu Phe Gly Ser Asn Val Thr Asp Cys Ser Gly Asn
465   1           5           10           15
469 Phe Cys Leu Phe Arg
471           20
477 <210> SEQ ID NO: 13
479 <211> LENGTH: 16
481 <212> TYPE: PRT
483 <213> ORGANISM: Homo sapiens
487 <400> SEQUENCE: 13
489 Gln Gln Gln His Leu Phe Gly Ser Asn Val Thr Asp Cys Ser Gly Asn
491   1           5           10           15
497 <210> SEQ ID NO: 14
499 <211> LENGTH: 5
501 <212> TYPE: PRT
503 <213> ORGANISM: Homo sapiens
507 <400> SEQUENCE: 14
509 Phe Cys Leu Phe Arg
511   1           5
517 <210> SEQ ID NO: 15
519 <211> LENGTH: 12
521 <212> TYPE: PRT
523 <213> ORGANISM: Homo sapiens
527 <400> SEQUENCE: 15
529 Val Thr Asp Cys Ser Gly Asn Phe Cys Leu Phe Arg
531   1           5           10
537 <210> SEQ ID NO: 16
539 <211> LENGTH: 9
541 <212> TYPE: PRT
543 <213> ORGANISM: Homo sapiens
547 <400> SEQUENCE: 16

```

RAW SEQUENCE LISTING

DATE: 02/14/2003

PATENT APPLICATION: US/09/646,950A

TIME: 13:50:20

Input Set : A:\#321994 v1 - 350013-71 Sequence Listing.txt

Output Set: N:\CRF4\02142003\I646950A.raw

```

549 Gln Gln Gln His Leu Phe Gly Ser Asn
551   1           5
557 <210> SEQ ID NO: 17
559 <211> LENGTH: 210
561 <212> TYPE: PRT
563 <213> ORGANISM: Homo sapiens
567 <400> SEQUENCE: 17
569 Met Asp Asp Gln Arg Asp Leu Ile Ser Asn Asn Glu Gln Leu Pro Met
571   1           5           10           15
575 Leu Gly Arg Arg Pro Gly Ala Pro Glu Ser Lys Cys Ser Arg Gly Ala
577           20           25           30
581 Leu Tyr Thr Gly Phe Ser Ile Leu Val Thr Leu Leu Leu Ala Gly Gln
583           35           40           45
587 Ala Thr Thr Ala Tyr Phe Gln Gln Gln Gly Arg Leu Asp Lys Leu Thr
589           50           55           60
593 Val Thr Ser Gln Asn Leu Gln Leu Glu Asn Leu Arg Met Lys Leu Pro
595   65           70           75           80
599 Lys Pro Pro Lys Pro Val Ser Lys Met Arg Met Ala Thr Pro Leu Leu
601           85           90           95
605 Met Gln Ala Leu Pro Met Gly Ala Leu Pro Gln Gly Gln Asn Ala Thr
607           100          105          110
611 Lys Tyr Gly Asn Met Thr Glu Asp His Val Met His Leu Leu Gln Asn
613           115          120          125
617 Ala Asp Pro Leu Lys Val Tyr Pro Pro Leu Lys Gly Ser Phe Pro Glu
619           130          135          140
623 Asn Leu Thr His Leu Lys Asn Thr Met Glu Thr Ile Asp Trp Lys Val
625  145          150          155          160
629 Phe Glu Met His His Trp Leu Leu Phe Glu Met Ser Arg His Ser Leu
631           165          170          175
635 Glu Gln Lys Pro Thr Asp Ala Pro Pro Lys Glu Ser Leu Glu Leu Glu
637           180          185          190
641 Asp Pro Ser Ser Gly Leu Gly Val Thr Lys Gln Asp Leu Gly Pro Val
643           195          200          205
647 Pro Met
649   210
655 <210> SEQ ID NO: 18
657 <211> LENGTH: 10
659 <212> TYPE: PRT
661 <213> ORGANISM: Clostridium tetani
665 <400> SEQUENCE: 18
667 Arg His Ile Asp Asn Glu Glu Asp Ile Asp
669   1           5           10
675 <210> SEQ ID NO: 19
677 <211> LENGTH: 10
679 <212> TYPE: PRT
681 <213> ORGANISM: Clostridium tetani
685 <400> SEQUENCE: 19
687 Tyr Thr Pro Asn Asn Glu Ile Asp Ser Phe
689   1           5           10

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/646,950A

DATE: 02/14/2003
TIME: 13:50:21

Input Set : A:\#321994 v1 - 350013-71 Sequence Listing.txt
Output Set: N:\CRF4\02142003\I646950A.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41
Seq#:1; Line(s) 43,45,47,49,51,53,55,57,59,61,63,65,67,69,71,73,75
Seq#:2; Line(s) 77,79,81,83,85,87,89,91,93,95,97,99,101,103,105
Seq#:3; Line(s) 107,109,111,113,115,117,119,121,123,125,127,129,131,133,135
Seq#:3; Line(s) 137,139,141,143,145,147,149,151,153,155,157,159,161,163,165
Seq#:3; Line(s) 167,169,171,173,175,177,179,181,183,185,187,189,191,193,195
Seq#:3; Line(s) 197,199,201,203,205,207,209,211,213,215,217,219,221,223,225
Seq#:3; Line(s) 227,229,231,233
Seq#:4; Line(s) 235,237,239,241,243,245,247,249,251,253,255,257,259,261,263
Seq#:4; Line(s) 265,267
Seq#:5; Line(s) 269,271,273,275,277,279,281,283,285,287,289
Seq#:6; Line(s) 291,293,295,297,299,301,303,305,307,309,311
Seq#:7; Line(s) 313,315,317,319,321,323,325,327,329,331,333
Seq#:8; Line(s) 335,337,339,341,343,345,347,349,351,353,355,357,359,361,363
Seq#:8; Line(s) 365,367
Seq#:9; Line(s) 369,371,373,375,377,379,381,383,385,387,389,391,393,395
Seq#:10; Line(s) 397,399,401,403,405,407,409,411,413,415,417,419,421,423
Seq#:11; Line(s) 425,427,429,431,433,435,437,439,441,443,445,447,449,451
Seq#:12; Line(s) 453,455,457,459,461,463,465,467,469,471,473,475,477
Seq#:13; Line(s) 479,481,483,485,487,489,491,493,495,497
Seq#:14; Line(s) 499,501,503,505,507,509,511,513,515,517
Seq#:15; Line(s) 519,521,523,525,527,529,531,533,535,537
Seq#:16; Line(s) 539,541,543,545,547,549,551,553,555,557
Seq#:17; Line(s) 559,561,563,565,567,569,571,573,575,577,579,581,583,585
Seq#:17; Line(s) 587,589,591,593,595,597,599,601,603,605,607,609,611,613
Seq#:17; Line(s) 615,617,619,621,623,625,627,629,631,633,635,637,639,641
Seq#:17; Line(s) 643,645,647,649,651,653,655
Seq#:18; Line(s) 657,659,661,663,665,667,669,671,673,675
Seq#:19; Line(s) 677,679,681,683,685,687,689,691,693,695
Seq#:20; Line(s) 697,699,701,703,705,707,709,711,713,715
Seq#:21; Line(s) 717,719,721,723,725,727,729,731,733,735,737,739,741,743
Seq#:22; Line(s) 745,747,749,751,753,755,757,759,761,763,765,767,769,771
Seq#:23; Line(s) 773,775,777,779,781,783,785,787,789,791
Seq#:24; Line(s) 793,795,797,799,801,803,805,807,809,811
Seq#:25; Line(s) 813,815,817,819,821,823,825,827,829,831
Seq#:26; Line(s) 833,835,837,839,841,843,845,847,849,851
Seq#:27; Line(s) 853,855,857,859,861,863,865,867,869,871
Seq#:28; Line(s) 873,875,877,879,881,883,885,887,889,891
Seq#:29; Line(s) 893,895,897,899,901,903,905,907,909,911
Seq#:30; Line(s) 913,915,917,919,921,923,925,927,929,931
Seq#:31; Line(s) 933,935,937,939,941,943,945,947,949,951
Seq#:32; Line(s) 953,955,957,959,961,963,965

VERIFICATION SUMMARY

DATE: 02/14/2003

PATENT APPLICATION: US/09/646,950A

TIME: 13:50:21

Input Set : A:\#321994 v1 - 350013-71 Sequence Listing.txt

Output Set: N:\CRF4\02142003\I646950A.raw

L:19 M:270 C: Current Application Number differs, Replaced Current Application Number

L:21 M:271 C: Current Filing Date differs, Replaced Current Filing Date